

R-2 With Air - My Way

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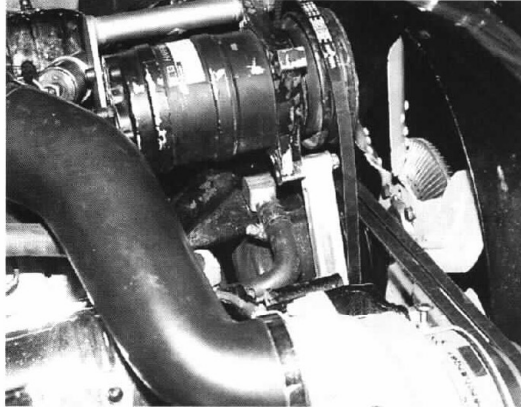
My wife and I bought 63R 1653 in the Summer of 1994. I drove the car back to Ontario from Rochester while my wife followed. The cabin temperature was far too much but the trip was not too long and after all it was my Avanti. It needed a fair amount of restoration work but we had the car in reasonable enough shape to drive it to Dearborn in 1995. The weather was not too hot as I recall, so the journey to and from the meet was not too onerous. Our next outing of any distance was South Bend in 1997. This time it was hot and humid and the last 150 miles were unbearable. The decision was made to install air-conditioning.

Most people that I contacted said that it was not possible to mount a compressor under the hood of an Avanti with the supercharged engine and the local A/C shops refused to try.

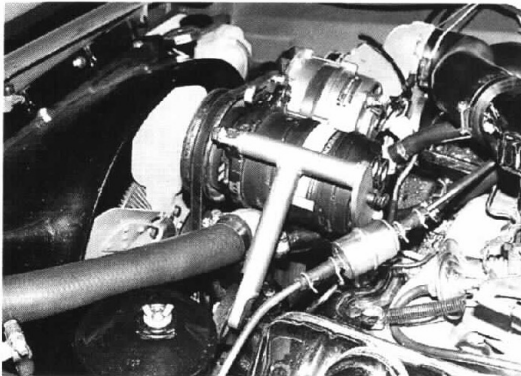
After much research I found various methods of adding air to an R-2 but most of them required battery relocation, butchering, or altering the car to some degree. I had previously resolved I would not make any changes which could not be reversed. With this in mind I located an old article in a very early issue of Avanti Magazine which gave me the inspiration to start this project.

I obtained a catalogue from Vintage-air and decided to go with their system and use a heater/air conditioner unit which replaced the existing Avanti heater. I felt that such an installation would not detract too much from the original appearance of the car. Unfortunately, I could not find a Sanden compressor (as used on the Vintage-air systems) which could be used as a mock-up. I did borrow one from a friend but I thought it wise not to saw off pieces to make it fit. (I still think that a Sanden 508 compressor will fit but one mounting lug has to be removed to clear the thermostat housing.) We went with a General Motors (Harrison) DA-6 Axial compressor from a 1983 Chevrolet Celebrity with a 2.8 engine. It has a single groove pulley. The Heat/Cool unit is a Vintage-air Model 64100 VUZ-A and is known as a COMPAC. The unit is 20 1/2" long and after you remove the Avanti heater you will find a space exactly 21" long so the unit fits quite snugly. It is so snug in fact that I chose to relocate the temperature regulator provided with the unit to the center console (where I mounted the other controls as I did not like the "pod" design that was provided.)

So here goes as to how it's done:



The Original Mock-Up with detail on the right side showing the lower mounting bracket. Note the 90 degree hose connection to the water manifold.



Drivers side with the bracket and compressor installed. Note the new thermostat housing & routing along with new coolant recovery system in place



Closeup view of bracket with compressor installed

MAKING ROOM FOR THE COMPRESSOR

- 1 First step is to obtain a fairly large box and label it Original Avanti Parts. Everything that you remove from your Avanti goes in the box so that in some future time you decide to return the car to stock condition you have all the parts.
- 2 Disconnect the battery.
- 3 Remove the reservoir tank and upper radiator hose (remember save all your parts in the Avanti parts box.)
- 4 Remove the radiator per the shop manual and take it to your local radiator shop and have them install a filler neck on the passenger side (not too high up or the hood may interfere) then re-install the radiator.)
- 5 Remove the two 3/4" heater hose elbows which are attached to the water manifold and replace them with 5/8" 90 degree brass units from a plumbing supply house on the drivers side and a 45 degree brass unit on the passenger side. Both these brass units are to change the existing 3/4" hoses to 5/8" because Vintage-air uses 5/8" heater hose connections. The 90 degree elbow setup must be used so that the heater hose routing is under the water manifold to allow for compressor clearance.
- 6 Purchase a coolant recovery system and install a new thermostat housing (water outlet) part # 1550 844 from Expressly Avanti and install them on the car. (The coolant recovery system comes with a wire retainer for the coolant jug ... do not use. Just put the jug on the passenger side of the radiator. There is a natural spot on the fender well which fits perfectly without the need for the wire retainer.
- 7 Obtain a lower radiator hose for a 1994 Ford Thunderbird 3.8 non-supercharged engine and cut 2 1/2 inches from the small end. (Leave the spring inside the hose because it may pinch together where it passes over the power steering pump reservoir top.)